

## FACT SHEET

August 25, 2008

### I. Applicant:

City of Bossier City  
Red River WWTP  
3512 Barksdale Blvd.  
Bossier City, LA 71112

Northeast WWTP  
8000 Shed Road  
Bossier City, La 71111

Attn: Honorable Lorenz Walker, Mayor

Agency Interest: 8832  
PERMIT ACTIVITY NO.: PER20080001  
Draft Permit Number: LASS008832

### II. Application Type:

Sewage Sludge and Biosolids Use or Disposal Permit Application submitted April 1, 2008 for the Red River WWTP and November 16, 2008 for the Northeast WWTP.

### III. Permit Action:

1.) Draft Sewage Sludge and Biosolids Use or Disposal Permit

2.) Termination of Solid Waste Permit P-0924.

The LDEQ, Office of Environmental Services prepared the Draft Permit to be in accordance with LAC 33:IX.7301.D.1.a.ii that requires the administrative authority to reissue a Louisiana Sewage Sludge and Biosolids Use or Disposal Permit to replace the Standard Solid Waste Permit, P-0294 issued to the City of Bossier City on March 7, 2005. Upon expiration of the comment period, if a determination is made to issue a final Louisiana Sewage Sludge and Biosolids Use or Disposal Permit, the Solid Waste Permit, P-0294, will be terminated.

### III. Preparation/Treatment Process:

The WWTP utilizes the standard activated sludge process of extended aeration followed by clarification. Once sludge exceeds the design capacity, the excess is pumped to a belt press for dewatering. Sludge is then enhanced through the N-VIRO process. The N-VIRO Process is a patented and EPA approved technology for the preparation/treatment process of sewage sludge. The N-VIRO process is utilized at both facilities.

The N-VIRO Process involves mixing the wastewater sludge with an alkaline admixture and then subjecting the mixture to a controlled period of storage, mechanical turning and accelerated drying in which a blending of the sludge and the alkaline admixture occurs. After blending, the material is stored for a period of 13 hours to allow temperature to rise

between 52 and 62 degrees Celsius and the pH to 12 or above. The stage of process is important for pathogen reduction and vector control. Metals in the sewage sludge will also be controlled in order to produce a final exceptional quality biosolids, or N-Viro Soil.

The N-VIRO Process has received an approval for pathogen reduction under Alternative 6 of LAC 40 CFR 503.32 (LAC 33:IX.7309.C.1.h) by the EPA Pathogen Equivalency Committee of being capable of meeting an equivalency of the pathogen reduction requirements at Alternative 2 of 40 CFR 503.32 (LAC 33:IX.7309.C.1.d). The N-VIRO Process utilizes time, temperature, and pH to meet EPA and LDEQ requirements for pathogen treatment and also vector attraction reduction at Option 6 of 40 CFR 503.33(b)(6)[LAC 33:IX.7309.D.2.d].

#### **IV. Use or Disposal Option**

Because the recovered material meets exceptional quality biosolids requirements, it can be disposed of or utilized without further tracking. The N-VIRO Soil will be delivered by trucks to selected sites or distributed to home owners who bring their own small trucks to the site.

#### **V. Pertinent Information**

**March 7, 2005** The City of Bossier City was issued a Solid Waste Permit, P-0294.

**March 27, 2008** The Water Permits Division received a permit application for the Use or Disposal of Sewage Sludge and Biosolids from the City of Bossier City.

**September, 2008** A technical review of the permit application was completed and it was determined that additional information was needed. The following additional information was requested:

1. A revised page 18 of the application for the Red River WWTP indicating the amount of exceptional quality biosolids produced at the facility in tons/year on a dry weight basis.
2. A permit application for the Northeast WWTP to be covered under the final Louisiana Sewage Sludge and Biosolids Use or Disposal Permit LASS052341.

**November 17, 2008** Additional information was received by the Water Permits Division.

**December 15, 2008** The draft Sewage Sludge & Biosolids Use or Disposal Permit package was completed and routed for review and approval.

**February 6, 2009** Preliminary review indicated changes/edits to be addressed. New regulations were approved and forms were updated.

**April 21, 2009** The draft Sewage Sludge & Biosolids Use or Disposal Permit package was completed and routed for review and approval.

## VI. Permit Requirements

### Odor Management

- a. The production of odor shall be minimized.
- b. Any processed air produced at the preparation/treatment facility and other sources shall be contained and, if necessary, treated in order to remove odor before discharging to the atmosphere.

### Hazardous Sewage Sludge

- a. The Permit does not establish requirements for the use or disposal of sewage sludge that is hazardous under 40 CFR Part 261 and/or LAC 33:Part V.
- b. The permittee must take all steps to assure that any material prepared with sewage sludge is non-hazardous in accordance with 40 CFR Part 261 and/or LAC 33:Part V.

### Sewage Sludge with High PCB Concentration

This permit does not establish requirements for the use or disposal of sewage sludge containing polychlorinated biphenyls (PCBs) that are regulated by the Toxic Substance Control Act.

### Land Application

#### 1. Pollutant Concentrations

Biosolids prepared by the City of Bossier City under this permit shall not be sold or given away for use as an Exceptional Quality Biosolids if the concentration of any pollutants in the Biosolids exceeds the ceiling concentration for the pollutant in Table 1 below:

Table 1	
Ceiling Concentrations	
Pollutant	Ceiling Concentration (milligrams per kilogram) <sup>1</sup>
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500
<sup>1</sup> Dry weight basis	

The concentration for each pollutant in the Biosolids prepared by The City of Bossier City shall not exceed the concentration for the pollutants in Table 2 below prior to being sold or given away as an Exceptional Quality Biosolids:

Table 2	
Pollutant Concentrations	
Pollutant	Monthly Average Concentration (milligrams per kilogram) <sup>1</sup>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800
<sup>1</sup> Dry weight basis	

## 2. Pathogen Reduction and Vector Attraction Requirements:

Pathogen reduction requirements shall be achieved through the Class A Alternative indicated in Table 3 below:

TABLE 3	
PATHOGEN REDUCTION	
NAME OF FACILITY	CLASS A ALTERNATIVE
City of Bossier City	<p>Alternative 6 – N-VIRO® As allowed by LAC 33:IX.7309.C.h.i that states either the density of fecal coliform in the biosolids shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of Salmonella sp. Bacteria in the biosolids shall be less than 3 Most Probable Number per 4 grams of total solids (dry weight basis) at the time the biosolids are used or disposed, at the time the biosolids are prepared for sale or to be given away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements of Exceptional Quality biosolids.</p> <p>The process conditions for this alternative are:</p> <ul style="list-style-type: none"> <li>• The pH of the sewage sludge is raised to above 12 and remains above 12 for 72 hours.</li> <li>• The temperature of the sewage sludge remains above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12; and</li> <li>• At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge is air-dried to achieve a percent solids greater than 50 percent.</li> </ul>

### 3. Vector Attraction

Vector Attraction Reduction requirements shall be achieved through the procedure indicated below:

TABLE 4	
VECTOR ATTRACTION REDUCTION	
NAME OF FACILITY	PROCEDURE
City of Bossier City	<b>Alternative 6</b> – The N-VIRO® process which meets or exceeds the PEC's equivalency for pathogens also satisfies the requirement for vector attraction reduction for alkaline treatment as allowed by LAC 33:IX.7309.D.2.d.

#### Monitoring and Sampling & Analysis:

All samples and measurements taken for the purpose of laboratory analysis shall be representative of the monitored activity and shall be in accordance with the methods referenced in LAC 33:IX.7301.I. 1.b. The permittee shall sample and analyze representative samples of any material, except Agricultural Grade Lime, that is to be added, blended, or mixed with the sewage sludge during the preparation of the Exceptional Quality Biosolids for the parameters listed and at the frequency indicated in Table 5a below:

Table 5a Hazardous Characteristics and Pollutant Testing Requirements For The Raw (Untreated) Sewage Sludge and Materials " Added, Blended, or Mixed with the Sewage Sludge	
Parameter	Sampling Frequency
TCLP	Once/Year
Metals (As, Ba, Cd, Cr, Pb, Se, Ag)	
Hg	
Volatile Organics	
Semi-Volatile Organics	
Pesticides	
Herbicides	Once/Year
PCB (Total)	

"Any material, except Agricultural Grade Lime, that is to be added, blended, or mixed with the sewage sludge must be sampled and tested prior to adding, blending, or mixing with the sewage sludge.

The permittee shall sample and analyze representative samples of the Biosolids prepared by the City of Bossier City for the parameters listed in and at the frequency indicated in Table 5b below prior to the Biosolids being sold or given away as an Exceptional Quality Biosolids:

Table 5b Exceptional Quality Biosolids (Pollutant and Pathogen Testing)	
Parameter	Sampling Frequency
Pathogens <sup>1/</sup>	Once/Quarter (4 times/year)
Arsenic, Cadmium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Zinc (All on a Dry Weight Basis)	Once/Quarter (4 times/year)
pH	Once/Quarter (4 times/year)
Percent Total Solids	Once/Quarter (4 times/year)

<sup>1/</sup> Unless further notified by the Department, the Analytical Method to be utilized if analyzing for Fecal Coliform must be one of the following:

(1) *Standard Method for the Analysis of Water and Wastewater* - Part 9221E or (2) EPA Method 1680

All samples and measurements taken for the purpose of laboratory analysis shall be representative of the monitored activity and shall be in accordance with the methods referenced in LAC 33:IX.7301.I.

#### Treatment Process Monitoring

- Monitoring of the City's preparation/treatment processes shall be performed as indicated in Table 6 below:

Table 6: Monitoring Requirement	
Outfall	
201 and 202	<ol style="list-style-type: none"> <li>Sludge Temperature (either continuous chart or two readings per day, at least one per shift.)</li> <li>Time of temperature reading (date, hour, minute)</li> <li>Sludge pH</li> <li>Time of Sludge pH Reading (date, hour, minute)</li> <li>Percent solids of the biosolids</li> </ol>

- The information obtained for the monitoring requirements in Table 6 shall be:
  - Retained for the life of the permit,
  - Kept at the facility in a secure, dry, and easily accessed location, and,
  - Readily available to the administrative authority or DEQ personnel upon request.

**Reporting:**

The permittee shall submit reports to the administrative authority as indicated below:

1. The annual amount of sewage sludge generated at the facility shall be reported on February 28 of each year.
2. The annual amount of sewage sludge that is prepared into an Exceptional Quality Biosolids shall be reported on February 28 of each year.
3. For the parameters listed in Table 5a of this permit, the reporting shall be once per year on or before February 28.
4. For the parameters listed in Table 5b of this permit, the reporting due date is as indicated in Table 7 below:

<b>Table 7</b>	
<b>Reporting</b>	
<b>Monitoring Period</b>	<b>Report Due Date</b>
January, February, March	May 28
April, May, June	August 28
July, August, September	November 28
October, November, December	February 28

**Label or Information Sheet Requirements**

a. A label or information sheet derived from the results during each quarterly testing period required for the parameters in Tables 5a & 5b above shall accompany the Exceptional Quality Biosolids that are sold or given away in bulk or a bag or other container by the City of Bossier City.

b. The label or information sheet shall contain the following information:

1. the name and address of the preparer;
2. the concentration (by volume) of each pollutant listed in Table 5 above;
3. percent nitrogen;
4. percent ammonia nitrogen;
5. pH;
6. the concentration of PCB in *mg/kg* of total solids (dry weight);
7. application instructions; and,
8. the following statement: *"The application of Biosolids to the land is prohibited except in accordance with the instructions on this label or information sheet."*

**VII. Draft Permit Package Prepared By:** Angela Marse